

ATTACHMENT B



2007 Reporting for the Commonwealth Accountability Testing System (CATS)

Concordance (Detailed Presentation)



Review of the Past

KIRIS 1991-2000 and CATS 2000-2006

- **KIRIS and CATS were different enough to call for a new start in the accountability system.**
- **KDE developed a bridge model or a statistical link to move from KIRIS to CATS.**
 - **The bridge used a regression approach.**
 - **The bridge was used for a biennium to keep accountability moving forward.**
 - **New baselines and accountability goal lines were drawn after the two-year bridge was complete.**

Review of the Past

KIRIS 1991-2000 and CATS 2000-2006

- **Now in 2007, Kentucky is faced with similar issues with the changes from old CATS (2000-2006) to new CATS (2007 and beyond).**
- **Rather than a regression model the National Technical Advisory Panel on Assessment and Accountability (NTAPAA) recommended the use of a Concordance Table as the statistical link of old and new systems.**

Why does Kentucky need a statistical link?

- **Issues similar to the move from KIRIS to CATS.**
- **Kentucky is halfway through the 14 Year CATS school improvement cycle.**
- **Changes to Assessment System**
 - **new Kentucky Core Content Test (KCCT) design**
 - **revised Core Content 4.1**
 - **KCCT Administered in new or different grades**

Why does Kentucky need a statistical link?

- new student performance cut scores from standard setting/validation in summer 2007**
- Changes to Accountability System**
 - revised weighting of tests**
 - ACT Index added at high school**
- Changes do not allow direct comparison of data from 2006 to 2007.**

Technical Assumptions

- **There is a desire to keep accountability index targets in place**
- **State-level trends in accountability indices are stable over time**
- **The overall effect of changes in assessment and accountability system is not large**
- **Statistical equating of all tests is not feasible**

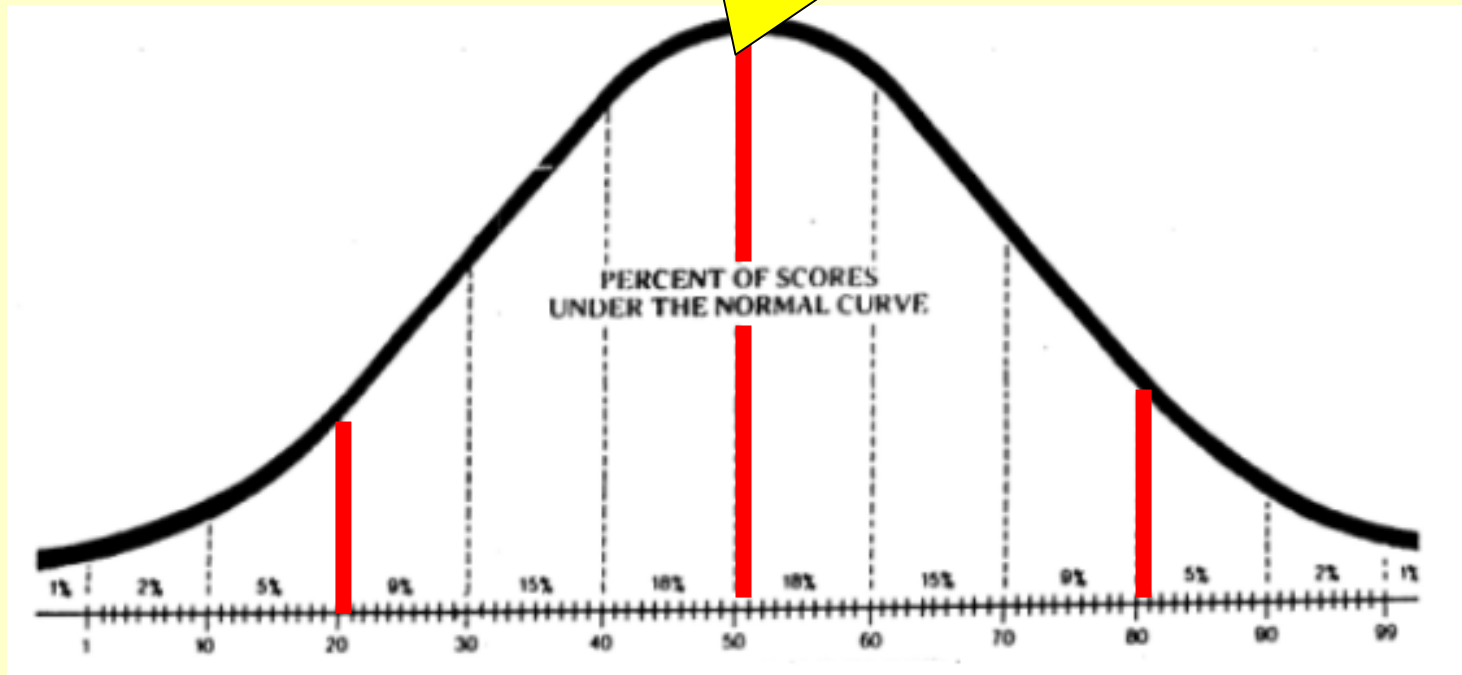
Purpose of a Concordance

- **links old system (1998-2006) to new system (2007-beyond)**
- **links at the accountability index level ONLY**
- **no baselines recalculated**
- **no growth lines redrawn**

Concordance Table

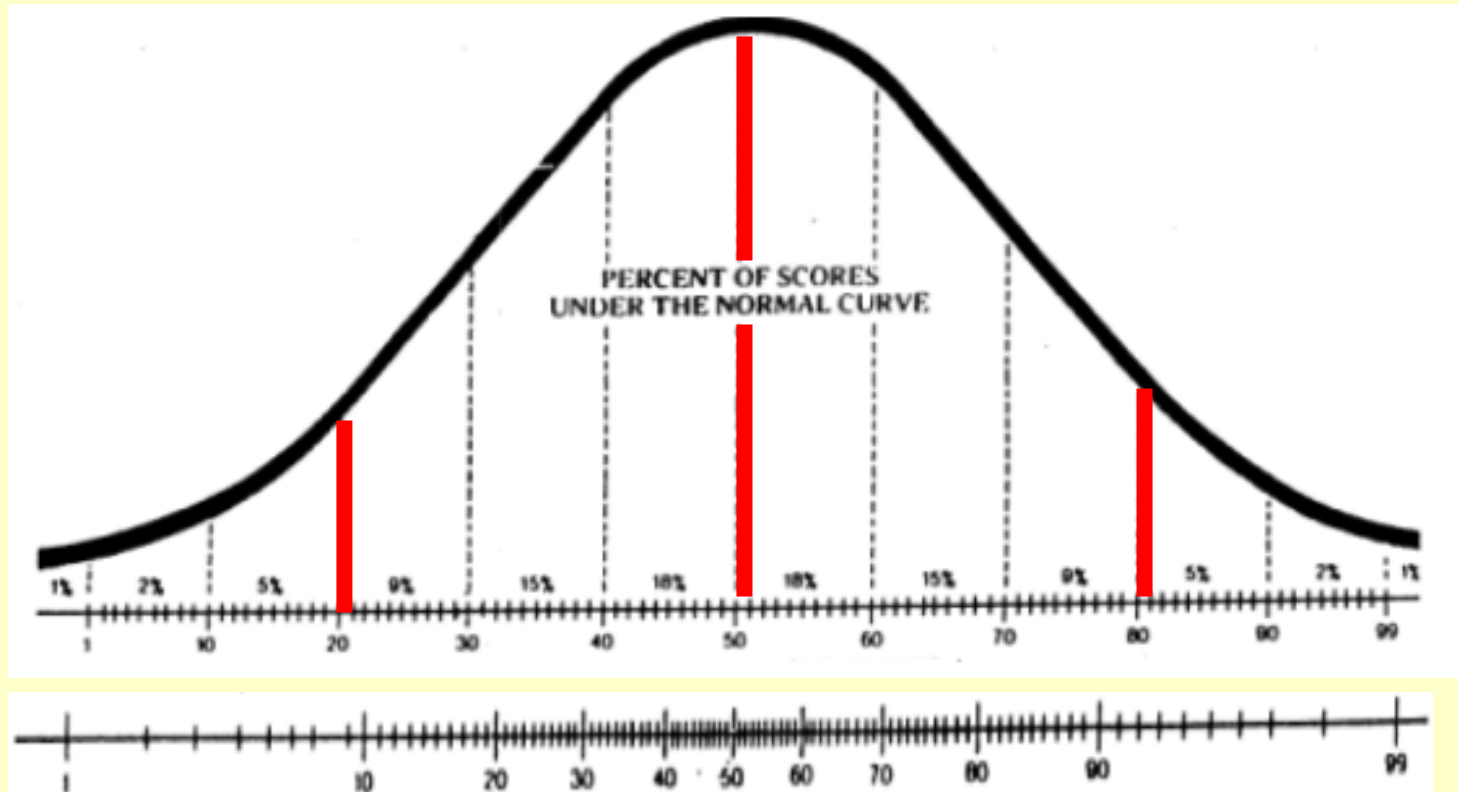
- **often used to compare scores of similar tests, e.g., ACT and SAT**
- **simple to apply to Kentucky results**
- **recommended by National Technical Advisory Panel on Assessment and Accountability (NTAPAA)**

50th Percentile: 50 Percent
scoring **at or below**



Percentile: Percentage Scoring **at or below**

Performance can be rank ordered
from lowest to highest.



Lowest
Accountability Index

Highest
Accountability Index

Order of
scores
(lowest to
highest)
on a
particular
test

NELS Reading Standard Score, 1992	NELS Reading Percentile Score, 1992
48.63	39
48.98	40
49.32	41
49.71	42
50.00	43
50.33	44
50.65	45
50.94	46
51.29	47
51.66	48
52.00	49
52.29	50
52.56	51
52.92	52
53.20	53
53.51	54
53.79	55
54.01	56
54.34	57
54.67	58
54.87	
55.15	60
55.44	61

Percentile
rank
indicates
where a
score is
located
relative to
all other
scores.

A score of 54.67 is at the
58th Percentile or
"58% scored at or below
the score of 54.67."

NELS Reading Standard Score, 1992	NELS Reading Percentile Score, 1992
48.63	39
48.98	40
49.32	41
49.71	42
50.00	43
50.33	44
50.65	45
50.94	46
51.29	47
51.66	48
52.00	49
52.29	50
52.56	51
52.92	52
53.20	53
53.51	54
53.79	55
54.01	56
54.34	57
54.67	58
54.87	59
55.15	60
55.44	61



NAEP Reading Percentile Score, 1992	NAEP Reading Standard Score, Year Invariant
39	276.0
40	277.2
41	278.3
42	279.5
43	280.6
44	281.7
45	282.9
46	284.1
47	285.2
48	286.4
49	287.5
50	288.6
51	289.8
52	290.9
53	292.1
54	293.2
55	294.3
56	295.4
57	296.5
58	297.6
59	298.7
60	299.8
61	300.9

A score on one assessment can be related to the score on a similar assessment by lining up the percentile ranks.

How would a CATS Concordance Table be created?

Step 1: Using the new cut scores for student performance and the new weights for content areas and multiple choice and open response items, the 2007 Nonadjusted Accountability Index is calculated.

2007 Nonadjusted	
Accountability Index	Percentile Rank
80.0	52
80.1	53
80.2	54
80.3	55
80.4	56
80.5	57
80.6	58
80.7	59
80.8	60
80.9	61
81.0	62
81.1	63
81.2	64
81.3	65
81.4	66

Step 2: A percentile rank for the Nonadjusted Accountability Index is created.

How would a CATS Concordance Table be created?

2007 Estimated	
Percentile Rank	Accountability Index
SIMULATED DATA	
52	80.2
53	80.2
54	80.3
55	80.4
56	80.4
57	80.5
58	80.6
59	80.6
60	80.7
61	80.8
62	80.9
63	80.9
64	81.0
65	81.1
66	81.2

Step 4: A percentile rank for the estimated accountability index is created.

Step 3: Using the 2000-2006 growth trends in the Accountability Index for each grade span, the 2007 scores are estimated based on the assumption that the growth trend would continue.

How would a CATS Concordance Table be created?

2007 NonAdjusted			2007 Estimated	
<div><div>SIMULATED DATA</div></div>	Percentile Rank		Percentile Rank	Accountability Index
80.0	52	<div>Step 5: Line up the percentile ranks using an equipercentile approach, to create a Concordance Table in which each Nonadjusted Accountability Index is matched to the Estimated Accountability Index that has the same percentile rank.</div>	52	80.2
80.1	53		53	80.2
80.2	54		54	80.3
80.3	55		55	80.4
80.4	56		56	80.4
80.5	57		57	80.5
80.6	58		58	80.6
80.7	59		59	80.6
80.8	60		60	80.7
80.9	61		61	80.8
81.0	62		62	80.9
81.1	63		63	80.9
81.2	64		64	81.0
81.3	65		65	81.1
81.4	66		66	81.2

How would a CATS Concordance Table be created?

Step 6: The estimated scores are now labeled "Adjusted Accountability Index" to indicate that index scores based on the 2007 results are concordant with the 2000-2006 index scores.

2007 Estimated	
Percentile Rank	Accountability Index

After the percentiles are matched, "Estimated" becomes "Adjusted."

2007 Adjusted	
Percentile Rank	Accountability Index

How would a CATS Concordance Table be organized?

2007 Nonadjusted	
Accountability Index	Percentile Rank
80.0	52
80.1	53
80.2	54
80.3	55
80.4	56
80.5	57
80.6	58
80.7	59
80.8	60
80.9	61
81.0	62
81.1	63
81.2	64
81.3	65
81.4	66

2007 Adjusted	
Percentile Rank	Accountability Index
52	80.2
53	80.2
54	80.3
55	80.4
56	80.4
57	80.5
58	80.6
59	80.6
60	80.7
61	80.8
62	80.9
63	80.9
64	81.0
65	81.1
66	81.2

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Office of Assessment and
Accountability

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How would a CATS Concordance Table be organized?

2007 NonAdjusted

Accountability Index

2007 Adjusted

Accountability Index

SIMULATED DATA **SIMULATED DATA**

80.0

80.1

80.2

80.3

80.4

80.5

80.6

80.7

80.8

80.9

81.0

81.1

81.2

81.3

81.4

Once the percentile match is established, the 2007 Nonadjusted Accountability Index can be compared directly to the 2007 Adjusted Accountability Index.

80.2

80.2

80.3

80.4

80.4

80.5

80.6

80.6

80.7

80.8

80.9

80.9

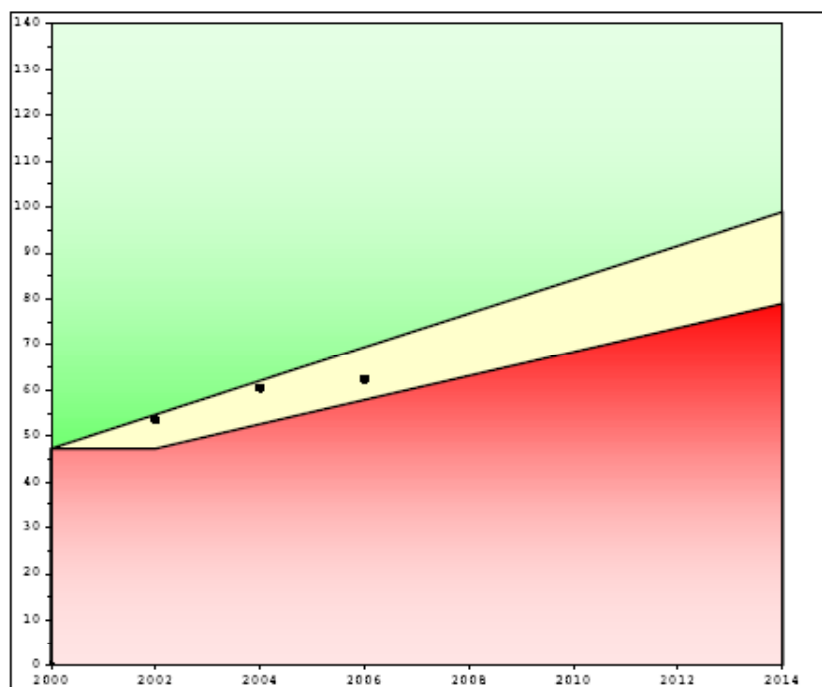
81.0

81.1

81.2

Using The Concordance Table

Compare the Adjusted Accountability Index to the School's 2007-08 Combined Goal and Assistance Target



	School			Accountability		
	Index	% Novice	Dropout	Goal	Assistance	Novice
1999	48.0	51.06				
2000	48.6	52.73				
*Baseline	48.3	51.90		47.3		51.90
2001	52.5	44.67				
2002	54.6	37.76				
Combined	53.6	41.22		54.7	47.3	45.20
2003	59.4	39.02				
2004	61.5	32.47				
Combined	60.5	35.75		62.1	52.6	38.50
2005	56.7	37.01				
2006	68.1	27.91				
Combined	62.4	32.46		69.5	57.9	31.80
2007	70.2	24.20				
2008						
Combined				76.9	63.2	25.10
2009						
2010				84.2	69.4	18.40
2011				91.6		11.70
2012				99.0		5.00
Standard						

2007 Adjusted Accountability Index

2007-08 combined goal and assistance target have not changed.



2006-2007
KENTUCKY PERFORMANCE REPORT
ACCOUNTABILITY TREND

School: Any School
District: Any District
Code: 999888
Grade: Elementary

Academic Index	2007	2008	2009	2010	2011	2012	2013	2014
Reading	76.0272							
Mathematics	69.3138							
Science	70.9687							
Social Studies	67.9989							
Arts and Humanities	69.0126							
Prac. Living/Voc. Studies	60.5649							
Writing	77.4161							
Total Academic Index	71.6							

Nonadjusted data

Non-Academic Indicators	2007	2008
Attendance Rate	95.20	
Dropout Rate		
Retention Rate	0.00	
Graduation Rate		
Successful Transition to Adult Life		
Non-Academic Index	97.1200	

**Area is blank for elementary and middle schools.
ACT Index replaces this area for high schools.**

National Norm Referenced Test Index	2007	2008	2009	2010	2011	2012	2013	2014
NRT								

Accountability Index	2007	2008	2009
Accountability Index	72.3		

Nonadjusted data

Number of Accountability Students	2007	2008	2009	2010	2011	2012	2013	2014
Number Tested End of Primary	46							
Number Tested Grade 4	55							
Number Tested Grade 5	47							

Notes

- **The Concordance Table will only be applied to a school's overall accountability index.**
 - **Individual student scores and content area indices will not be adjusted.**
- **The Concordance Table is based on the performance of all public schools in the state.**

Notes

- **Changes in this year's assessment and accountability system may affect the state-wide percent of students meeting standard in one of three ways:**
 - no effect
 - increase
 - decrease
- **Therefore, the overall level of school proficiency can only be determined after applying the concordance table.**

Questions

Please contact the Division of
Assessment Support.

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